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The global perspectives of flood risk and climate change

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Abstract
The hydrological cycle increased the intensity of rainfall and risk of flood with global warming. However, the changes often differ from the theorem expectation of increasing the water capacity of the atmosphere in hot conditions, especially when water availability is limited. Climate change to flooding can be a difficult endeavor. Not only are myriad weather and human-related factors in floods, but the limited data of past floods makes them difficult to measure against climate-driven trends of flooding today. It introduces impacts by region, and also impacts global mean surface temperature changes and global flood hazards. There are many numbers with analysis. It is only a global foreigner. The geographic model is based on, the climate landscape is constructed using pattern-scaling, and the exact effects are sensitive to certain assumptions in definition and application.

Keywords: Flood risk, climate change, hazard, global perspective

Introduction

Climate change has been one of the most important concerns in recent decades. Researchers have claimed that climate change is expected to accelerate global hydrology cycles. River discharge will increase due to increasing rainfall and less evaporation globally, indicating an increase in the frequency of flooding in many regions of the world. The risk of great floods increased during the 20th century. The projected floods and droughts for the 21st century show significant and major changes in the 20th century (i.e. from 1901 to 2000). A study on the UK's large rivers stated that climate change scenarios caused flood horrors and increased frequency. They observed that winter flows generally increased, with higher flows occurring more frequently, and that flood events increased more than floods with periods of lower returns.

The World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) set up this panel in 1988 to respond to policymakers' requests for key evaluation of the best scientific, technical and socio-economic information on climate change. That vast encyclopedia has been summarized by hundreds of top experts from all regions of the world, presenting a balanced synonym of core perspectives, and is not policy-relevant but policy-directive.

Governments review these scientific assessments, and along with the lead authors, approve the summary for policy makers by line. Thus, the reports provide the most comprehensive overview of scientific consensus and analysis of available uncertainties. They are widely used as the basis for climate change debates, including in the context of the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol. Unless other references are provided, all numbers on climate change observations and estimates are based on the IPCC, 2001a, while the IPCC's Third Assessment Report (IPCC, 2001b; 2001c; 2001d; 2001d) completes. Further details can be found in the report; Released in 2001. The Fourth Assessment Report will be completed in 2007, and is expected to include more information on extreme weather events as well as adaptation to climate change.

Climate change to flooding can be a difficult endeavor. Not only are myriad weather- and human-related factors in floods or not, but the limited data of past floods makes them difficult to measure against climate-driven trends of flooding today. Although the IPCC (Intergovernmental Panel on Climate Change) has mentioned in its special report on extremes, it is increasingly clear that climate change has affected "many water-related

variables" that contribute to flooding, Such as rain and snow. In other words, while our warm world cannot directly induce flooding, it does increase many factors. According to the Hydrological Special Report (released as part of the fourth National Climate Assessment, which addresses climate change in the US Reports on), more flooding in the United States is occurring in the Mississippi River Valley, Midwest, and Northeast, while U.S. coastal flooding has doubled in a matter of decades.

Anthropogenic climate change, or warm global warming is caused by increasing concentrations of greenhouse gases. These gases trap heat in our atmosphere by preventing radiation from going into space. Carbon dioxide (CO_2), the main greenhouse gas, is emitted when fossil fuels such as coal and oil are burned. Since the Industrial Revolution, fossil fuel use has increased very rapidly. Due to these emissions, as well as changes in agriculture and land use, atmospheric greenhouse gas concentrations have increased rapidly.

These changes in temperature had a range of secondary effects on hydrological systems and terrestrial and marine ecosystems. Examples include global mean sea level rise (one to two millimeters per year during the twentieth century), widespread retreat of glaciers, decreased ice cover, thawing of permafrost, shifting of plant and animal ranges (poleward). Increased frequency of coral bleaching events during the first flowering of plants, the breeding season of birds and the emergence of insects, and especially during El Niño episodes. There is strong evidence that this observed warming can be attributed to human greenhouse gas emissions. The current scientific consensus is that the majority of warming in the last 50 years is responsible for human activities' (IPCC 2001a, p. 5). Given that human emissions have already led to such global climate change initiatives, and most greenhouse gases remain in the atmosphere for at least several decades, climate change is bound to continue.

Indicators of change in exposure to flood hazards are based on simple measures of change (doubling or reducing the frequency of flooding) that are applied consistently throughout the world. Similarly, grid-cell risk estimates that the relationship between flood intensity and flood damage follow a general loss function, and that the return period at which flood damage begins is consistent worldwide. Finally, indicators do not include the effects of current or future adaptation; They are to be interpreted as measures of threat exposure rather than actual effects. Changes in the risk indicator can be interpreted as involving both the cost of investing in flood damage and protection against losses.

Furthermore, human emissions are still increasing, and are unlikely to stabilize anytime soon. Therefore, global warming seen in the last century is projected to accelerate in the coming decades. The expected range in global temperature rise is 1.4 to 5.8 ° C by 2100, based on projections about future emissions, and taking into account different results between a range of state-of-the-art climate models, which is roughly between the two previous. The century saw a rate of change 10 times. Such a rise in temperature can result in a rise in sea level by four to 88 centimeters globally. Even in the most optimistic emission scenarios, which can only be achieved by large-scale transition to alternative energy sources, climate change will continue for many decades and even centuries, both because of the greenhouse gases that already exist Have been emitted into the atmosphere, and because the delayed response of the oceans to the warming of the atmosphere. While the general direction of change is one of warmer environments, there have been and will be significant differences between different regions on Earth. Typically, polar regions warm up faster than tropical regions, and land areas warm up faster than oceans. In relation to rainfall, the general trajectory is that the hydrological cycle will become more intense. This results on average, in a wet climate. Once again, however, there are substantial differences between regions.

As with all weather events, the impact of these changes will depend on the systems in which they occur. For example, in some regions, global warming will initially boost agricultural productivity. In many areas, it will also reduce energy demand for heating in winter. However, as climate change occurs, the balance of impacts will become more and more negative, and there will be more and more irreversible effects, such as ecosystem damage. For human systems, a lot will depend on our ability to adapt to changes. Changes in crops, infrastructure design and many other aspects of society can increase resilience to adverse weather, as well as increase the benefits of climate change. Yet the ability to adapt to climate change is much more developed than in developing countries due to differences in expertise, technology, institutional capacity and funding. Ironically, the regions that have contributed the least to increasing greenhouse gases will suffer the greatest consequences.

Floods make people vulnerable, as they take away their livelihood in the first place and leave them with little resources to overcome the situation. Floods affect the poor, especially those living in flood-affected rural areas. The reason behind this is lack of assets and insufficient food supply. The floods not only spoil the social life of the people, but the economy also deteriorates completely. It causes considerable damage to standing crops, livestock, poultry, houses, transport and communication systems, educational and institutional buildings and other social facilities. It also deteriorates the normal functions of life affecting household, agricultural land, daily activities, water supply, sanitation conditions and economic structure.

These combined effects on society, economy and physical infrastructure endanger the livelihoods of the rural poor. The poor are constantly struggling to cope with these effects and manage their livelihoods. Sometimes, coping strategies do not become effective and only make them more vulnerable. People are forced to change their occupation for their livelihood. Due to the 2004 flood, 33.3% of people had become unemployed, and 46.5% had changed their occupation. Since the majority (53%) in the study area is dependent on agriculture, they have suffered greatly in income and occupation. Due to submerged condition of agricultural land, they were hit by floods.

Costly elements of road infrastructure, such as bridges, culverts and embankments (for roads and railways), are vulnerable to erosive losses in heavy rainfall and flooding. Even structures used to control flood events can increase risk and serious damage when excessive flooding occurs. Along with the Indus, during the 2010 floods in Pakistan, there were close to 2000 deaths and about 20 million people displaced due to the devastating effects of human-made reduced river water and sediment-related backwater potential in river dams /barrages changed into backwaters related to. Effects of multiple failures of the irrigation

system and. Many failures extending from upstream areas on the Indus tributaries, where some record discharges took place, reach the downstream Indus and the delta, where peak discharge was not through the peak medium. Where levies catch, drift peaks are higher, otherwise it would have been so; Where they fail, local flood damage can be catastrophic. In coastal areas along inland rivers and in back areas, levee structures are meant to protect against flooding, sometimes leading to the free discharge of ocean or floodwaters. Failure due to disallowance causes flooding.

How to protect Home from Flood

For frequently flooded homes, relocation may be the best option. But when rehabilitation is not possible, a wide array of measures exist to protect or reduce structures from flooding. These include keeping drains and drains free of debris; Installing a sump pump for crawl spaces and basements; Adding "check valves" to sewer lines to keep floodwaters in your home drains; And protecting indoor utilities and outdoor equipment by raising furnaces, water heaters, electrical systems, generators, and air-conditioning units from flood levels. In areas where flooding is a regular occurrence, more rigorous retrofits can include the entire structure of a house, wet flooding, and dry flooding.

Conclusion

Climate change has the potential to substantially change human exposure to the flood hazard, but that there is considerable uncertainty in the magnitude of this impact between different projections of regional change in climate. Finally, in many areas, the risks of river flooding can be well affected by climate. Change, and the general trend is toward higher flood risk. However, there is no general answer in relation to excess or direction of change uncertainty is generally increasing. Should conduct location specific flood risk analysis keep track of all risk-related trends, including geographic changes in catchment changes in area, property and population risk, as well as climate change.

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